

• COLORADO RIVER •  
**AQUEDUCT NEWS**

THE METROPOLITAN WATER DISTRICT



OF SOUTHERN CALIFORNIA

Vol. IV

April 25, 1937

No. 8



Monolithic siphon construction on the main aqueduct. This is Schedule 2B, 12-foot 4-inch siphon being built by Barrett and Hilp and Macco Corporation in Division 1.



# **COLORADO RIVER AQUEDUCT NEWS**

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA

306 WEST THIRD ST.  
LOS ANGELES, CALIFORNIA

*Published twice monthly in the interest of Field and Office Workers on the Colorado River Aqueduct, and for the information of all other citizens of the Metropolitan Water District.*

Vol. IV April 25, 1937 No. 8

## **Top of Big Dike Reaches Grade**

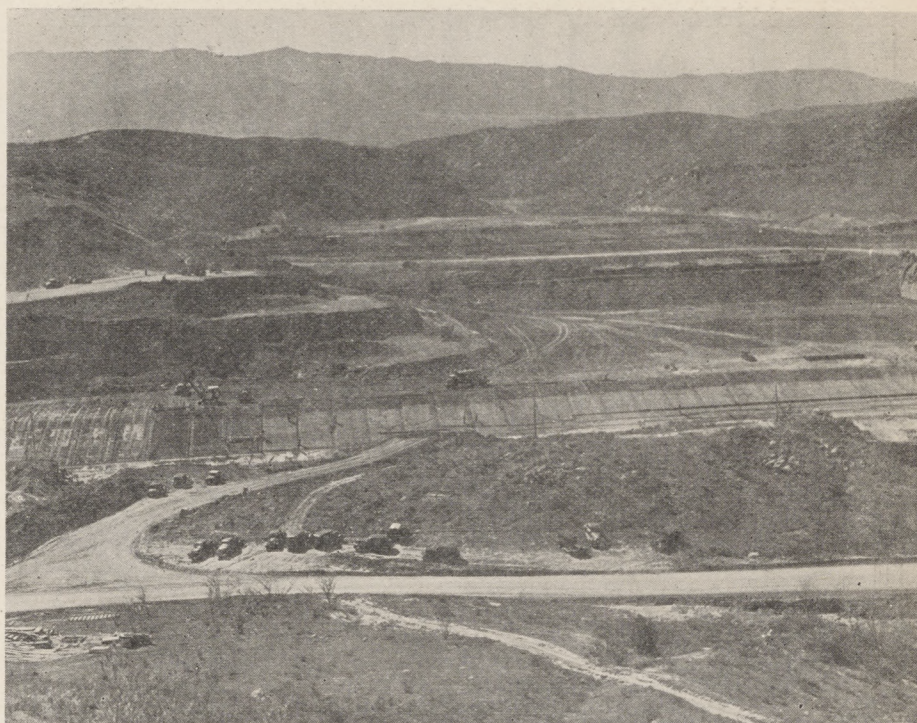
Griffith Company crews under the direction of General Superintendent Harry Davis have about completed the placing of the earthfill in the giant Cajalco Dike. On April 23, there remained less than 18,000 cubic yards of material to be placed. At present rate of progress, this yardage should be placed by the time this issue of the NEWS is distributed.

Along the greater part of its length the dike has already been brought up to grade, 3,835,000 cubic yards of earth having been placed thus far. This great wall of compacted earth is 7,500 feet long and has a maximum height of 90 feet. Running east and west, it forms the north boundary of the Cajalco Reservoir which will serve as the terminal reservoir of the main aqueduct, and as the beginning of the distributing system.

Construction of the dike was started on October 10, 1935. Since that time the speed with which earth on the dike has been moved, has attracted much attention. The maximum quantity of earth placed on the dike was during the month of January, 1936, when the crews—working on a three-shift basis—placed 450,000 cubic yards of material. There have been a number of weeks during the construction period when 110,000 cubic yards of earth have been placed during a seven-day period.

Work on the Cajalco Dam, also an earthfill structure, was started in February, 1936, and more than a million cubic yards have also been placed in that fill. The dam when completed will have a maximum height of fill of 209 feet.

Other work now in progress at the reservoir includes the construction of the outlet tower, and the lining of the outlet tunnel. The outlet tower is being constructed by the W. E. Hall Company, a subcontractor, and is approximately 25 per cent completed at the present time.



Earthfill construction on the Cajalco Dam being built by the Griffith Company. More than a million cubic yards of earth have already been placed in this structure which when completed will contain approximately 3,410,000 cubic yards of earth.

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Divisions 2 & 3.....John Stearns  
Division 4.....R. C. Booth  
Divisions 5 & 6.....J. B. Bond  
Distribution.....R. B. Diemer  
Transmission.....Robert N. Allen

### **SUPERINTENDENTS (Main Aqueduct Tunnels)**

Coxcomb and East Iron Mt. Tunnels, Winston Bros., R. V. Johnson, Gen. Supt.  
East Eagle Mt. Tunnel and West Eagle Mt. Tunnel, east portion, Broderick & Gordon, John Will, Gen. Supt.  
Coachella Tunnel, Dist. Force Acct., R. C. Booth, Gen. Supt.  
East Coachella Tunnel and 1000 Palms Tunnel, Concrete, V. T. Davis, Supt., J. C. Fisher, General Foreman.  
West Coachella Tunnels and Conduits, Concrete, Edwin Noon, Supt.  
San Jacinto Tunnel, District Force Acct., B. C. Leadbetter, Gen. Supt.; S. J. Shrode, John Austin and C. E. Sides, Tunnel Supts.; Chas. F. Thomas, Jr., Supt.; F. A. Backman, Gen. Foreman.

### **(Distribution Tunnels)**

Monrovia Tunnels Nos. 1, 2 and 3, West Construction Co., H. E. Carleton, Gen. Supt.; O. V. Humason, Peter Brisbols and Luther Dennis, Tunnel Supts. Concrete Supt., E. M. Penn.  
Pasadena Tunnel, San Rafael Tunnels Nos. 1 and 2, and Monrovia Tunnel No. 4, L. E. Dixon Co., Bent Bros., Inc., and Johnson, Inc., S. D. Hackley and W. N. Evans, Supts.

### **(Canal, Siphon, Conduit)**

Schedules Nos. 1, 1A, 1B, 10, 10A, 10B, 11, 11A, 11B, 11C, 13, 13A, and 13B, Aqueduct Construction Co., S. T. Corfield, Gen. Supt.; Charles Harlowe, Jr., Excav. Supt.  
Schedules Nos. 2, 2A, 2B, 3, 3A, 3B, 7, and 7A, Barrett & Hilt and Macco Corp.; H. W. McFinley, Supt.  
Schedules Nos. 4, 4A, 5, and 5A, Jahn & Bressi Construction Co., Joseph Muscolo, Gen. Supt.;

Dominick Bressi, Asst. Gen. Supt. Schedules Nos. 6, 8, 8A, and 8B, Clyde W. Wood and M. J. Bevanda, A. F. Weesmer, Gen. Supt.

Schedules Nos. 9, 9A, 9B, and 9C, The Utah Construction Co., Ben Arp, Gen. Supt.  
Schedules Nos. 12 and 12A, Three Companies, Inc., John Will, Supt.

Schedules Nos. 14, 15, and 16, Thompson - Starrett Co., Inc., Rodney Smith, Gen. Supt.; William Hayes, Excav. Supt.

Schedules Nos. 18, 19, and 20, J. F. Shea Co., Inc., J. G. Shea, Gen. Mgr.; H. F. Rennebohm, Supt.

### **(Distribution Pipe Line)**

Schedules No. 4P and 5P, American Concrete & Steel Pipe Co., Wm. A. Whiting, Gen. Supt.; D. H. Rankin, Plant Supt. and Const. Supt.

Schedules 6P and 7P, J. F. Shea Co., Inc., J. G. Shea, Gen. Mgr.; Ed. H. Shea, Gen. Supt. Schedules 10P, United Concrete Pipe Corp., John Huber, Plant Supt.; Roy Richards, Const. Supt.

Schedules 2B and 2S, Western Pipe & Steel Co., L. L. White, Supt.

### **(Dams)**

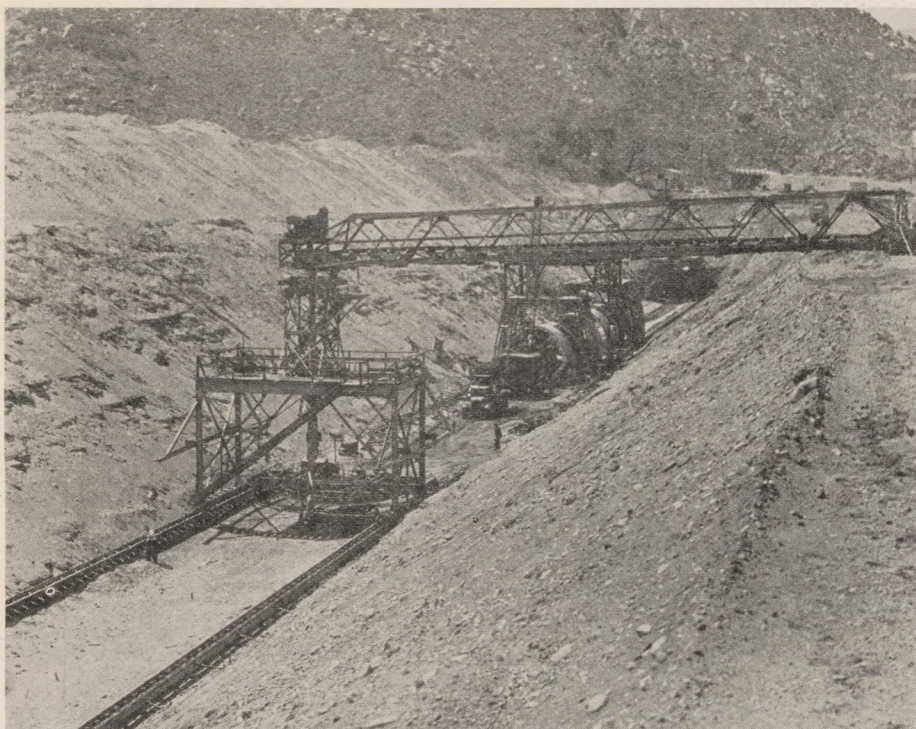
Cajalco dam, The Griffith Co., Harry Davis, Gen. Supt. Parker dam, J. F. Shea Co., Frank Crowe, Gen. Supt.; J. A. Moritz, Constr. Eng., U.S.B.R.

### **(Pumping Plants)**

Intake and Gene, Winston Bros. and Crowell, R. A. Crowell, Supt., F. T. Hillman, Engineer.

Iron Mountain, Wood and Bevanda; Grant Miner, Supt. Eagle Mountain, L. E. Dixon Co.; F. H. Strohecker, Supt. Hayfield, Dixon and Case; Crawford Strohecker, Supt.





Conduit construction gets under way at the east portal of the San Jacinto tunnel. Being built by the J. F. Shea Co., this is Schedule 19, and will connect the Whitewater and San Jacinto tunnels.

## Awards Made For Plant Equipment

The Board of Directors of the Water District at its regular meeting on Friday, April 23, made the following awards to contractors who had submitted low bids on the specifications listed:

The Guy E. Hall Company of Los Angeles was awarded a contract for the construction of temporary warehouses to be erected at the site of the five aqueduct pumping plants. The bid price was \$15,492, which was for all items of Specifications No. 202. These warehouses will be of wood frame construction and will be used to house machinery and equipment being installed in the various pumping plants.

A contract for furnishing five transformer cranes, varying from 30 to 60 tons in capacity, was awarded to the Cyclops Iron Works of San Francisco. The fabrication of these five cranes, one to be installed in each of the pumping plants, is covered in Specifications No. 201. The contractor's bid for the five cranes was \$75,822.

Air conditioning systems for the twenty-four permanent cottages to be built in the vicinity of the pumping plants will be furnished by the Baker Ice Ma-

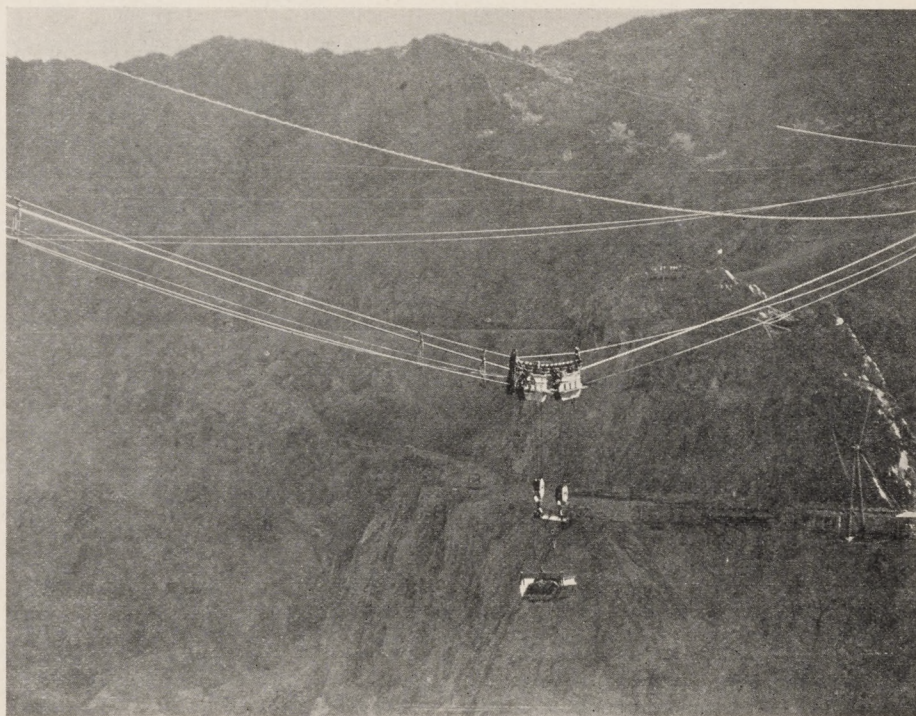
chine Company, Inc. of Los Angeles who was awarded a contract for \$25,210 for manufacturing the equipment. The work is covered by Specifications No. 203.

## MANY AGENCIES PICTURE AQUEDUCT

In addition to the District's own motion picture "Empire of the West" many other agencies are now photographing construction work on the aqueduct and releasing these pictures all over the nation. The current issue of the Fox Movietone News devotes a section of its program to work at Parker Dam, the Gene Wash pumping plant, and completed sections of the main aqueduct. Lowell Thomas is the narrator of this issue of the film which is now being shown at local theaters.

Following up their story in "Fortune," the publishers, Time, Inc., recently sent one of their staff photographers over the main aqueduct and the distributing system to make a series of pictures to illustrate the work. These photographs will probably be used in "Life," the picture magazine published by the Time publications. This series of pictures includes a large number of "candid camera" shots which, when published, may prove of much interest to aqueducters involved.

"Empire of the West," the new half-hour motion picture recently released by the District, has been in constant demand since it was made available and has been booked far in advance. At the present time it has been shown more than seventy times. These include showings in Washington, D. C., and Houston, Texas.



The late afternoon sunlight is reflected from the network of cables strung across the canyon at the Parker dam site.



## TUNNELS

## TUNNEL EXCAVATION (MILES)

	Completed	Remaining
Aqueduct	87.54	4.57
Distribution	16.20	0
Total	103.74	4.57

March 16 to April 15, 1937

## \*TUNNEL LINING (MILES)

	Completed	Remaining
Aqueduct	82.28	9.83
Distribution	8.94	7.21
Total	91.22	17.04

\*Arch considered to equal 0.9 completed section.

## TUNNEL PROGRESS

CONTRACTOR	TUNNEL	LENGTH IN FEET	EXCAVATION IN FEET					LINING IN FEET					
			NUMBER OF SHIFTS	AVERAGE PER SHIFT	THIS PERIOD	TOTAL TO DATE	REMAIN- ING	ARCH OR INVERT	NUMBER OF SHIFTS	AVERAGE PER SHIFT	THIS PERIOD	TOTAL TO DATE	REMAIN- ING
AQUEDUCT—CONTRACT													
WINSTON BROTHERS	COXCOMB (From E. Portal)	17,795		Completed		17,795	0	{ Arch Invert	29	358.6	0 10,400	17,795 17,795	0 0
BRODERICK & GORDON	E. EAGLE (From W. Portal)	9,440		Completed		9,440	0	{ Arch Invert			0	9,440	0
	W. EAGLE (E. PORTION)	(15,845)		Completed		(15,845)	(0)	{ Arch Invert			0	0	9,440
	East from Adit	7,871				7,871	0	{ Arch Invert			0	15,845	0
	West from Adit	7,974				7,974	0	{ Arch Invert			0	15,845	0
	TOTALS	Ft. Miles	43,080 (8.16)			43,080 (8.16)	0 0	Arch Invert	0 29	0 358.6	0 10,400	43,080 33,640	0 9,440

## AQUEDUCT—FORCE ACCOUNT

THE METROPOLITAN WATER DISTRICT OF SOUTHERN CALIFORNIA	EAST COACHELLA	(96,605)				(96,605)	0	{ Arch Invert	2 44	36.5 453.0	0	28,512	0
	East Portion	28,512		Completed		28,512	0				0	28,512	0
	West Portion	68,093		Completed		68,093	0				73 19,932	68,093 53,444	0 14,649
	SAN JACINTO	(68,849)			(831)	(44,719)	(24,130)	{ Arch Invert	72 0	36.6 0	(2,370) 2,633 0	(19,385) 4,910 130	(49,464) 3,970 8,750
	Cabazon Shaft to East Portal	8,880		Completed		8,880	0				0		
	Cabazon to Lawrence	26,817	93	7.8	723	13,710	13,107						
	Cabazon Pioneer	18,119	93	6.9	638	5,140	12,979						
	Lawrence Adit	5,651	93	5.3	496	3,425	2,226						
	Potrero Pioneer	15,163	93	2.2	204	5,129	10,034						
	Potrero to Lawrence	17,670	93	1.2	108	6,647	11,027						
Potrero Shaft to West Portal	15,482		Completed		15,482	0	{ Arch Invert	0 0	0 0	0 0	14,953 14,953	529 529	
TOTALS	Ft. Miles	165,454 (31.34)	186	4.5	831 (0.16)	141,324 (26.77)	24,130 (4.57)	Arch Invert	74 44	36.6 453.0	2,706 19,932	116,468 97,039	48,986 68,415

## DISTRIBUTION—CONTRACT

GRIFFITH CO.	CAJALCO OUTLET	2,368		Completed		2,368	0					0	2,344
WEST CONSTRUCTION CO.	MONROVIA NO. 1 (From W.P.)	7,868		Completed		7,868	0					7,796	0
	MONROVIA NO. 2 (From Jct.1)	940		Completed		940	0					856	0
	MONROVIA NO. 3	(32,105)		Completed		(32,105)	(0)		81	34.8	2,821	9,962	22,123
	East from Adit	11,340				11,340	0						
	West from Adit From West Portal }					5,913 }							
		20,765				14,851 }	0						
DIXON, BENT BROS. & JOHNSON	MONROVIA NO. 4 (From W.P.)	8,133	4	6.5	26	8,133	0					0	8,133
	PASADENA (From West Portal)	12,140		Completed		12,140	0		3	22.7	68	12,118	0
	SAN RAFAEL No.1 (From W.P.)	4,047		Completed		4,047	0		15	17.5	262	4,028	0
	SAN RAFAEL No. 2 (From E.P.)	5,669		Completed		5,669	0		21	10.2	214	214	5,447
	TOTALS	Ft. Miles	73,270 13.88	4	6.5	26 0.01	73,270 (13.88)	0 0	Full Section	120	28.0	3,365 (0.63)	34,974 (6.62)

## COMPLETED TUNNELS

	CONTRACTOR	TUNNEL	Length in Miles	Work Started	Work Completed
AQUEDUCT	MORRISON-KNUDSEN CO.	Mecca Pass, No. 1, 2 & 3	1.13	7-17-33	2-10-35
	WEST CONSTRUCTION CO.	Whitewater Nos. 1 & 2	1.94	7-18-33	4-15-35
	SHOFNER & GORDON	Hayfield No. 2	1.03	7-8-33	7-27-35
	HAMILTON & GLEASON	Bernasconi	1.18	4-19-33	11-21-35
	J. F. SHEA CO., INC.	Cottonwood	3.81	6-14-33	12-29-35
	HUNKIN-CONKEY CON. CO.	Hayfield No. 1	1.84	10-21-33	1-9-36
	DIXON & BENT BROS.	W. Eagle—West Portion	2.02	9-8-33	3-12-36
	DRAYO CONTRACTING CO.	Valverde	7.20	6-7-33	10-18-36
	WALSH CONSTRUCTION CO.	Colorado River	1.04	3-2-34	1-29-36
	WALSH CONSTRUCTION CO.	Copper Basin Nos. 1 & 2	2.32	10-4-33	2-20-36
	WALSH CONSTRUCTION CO.	Whipple Mountain	6.11	8-25-33	1-26-37
	UTAH CONSTRUCTION CO.	Iron Mt.—West Portion	3.07	5-15-33	10-23-36
	WINSTON BROS. CO.	Iron Mt.—East Portion	4.48	8-9-33	10-30-36
	METRO. WATER DIST.	1000 Palms No. 1	3.04	1-25-33	1-7-37
	" " "	1000 Palms No. 2	0.73	2-24-33	12-19-35
	" " "	Wide Canyon No. 1	2.71	3-31-33	2-11-37
	" " "	Wide Canyon No. 2	0.16	3-24-33	2-12-37
	" " "	Seven Palms	3.17	4-27-33	2-2-37
	" " "	Long Canyon	2.90	3-6-34	12-31-36
	" " "	Blind Canyon	1.29	3-22-34	12-3-36
	" " "	Morongo No. 1	1.08	4-21-34	1-20-37
	" " "	Morongo No. 2	0.36	12-29-34	1-5-37
	TOTALS		52.61		
DISTRIBUTION	J. F. SHEA CO., INC.	Sierra Madre	1.27	9-1-35	10-31-36
	DIXON, BENT BROS. & JOHNSON	Pasadena Extension	1.05	10-5-35	11-24-36
	TOTALS		2.32		



# ION PROGRESS

CANAL, CONDUIT AND SIPHON (MILES)

	Completed	Remaining
Excavation	136.53	9.13
Concrete	133.61	12.05
Back Fill	64.61	17.27

## CANAL, CONDUIT, SIPHON & PIPE LINES

March 28 to April 17, 1937

DISTRIBUTION PIPE LINE (MILES)

	Completed	Remaining
Excavation	31.05	15.26
Concrete	29.19	17.12
Back Fill	28.15	18.16

### AQUEDUCT

SCHED. NO.	CONTRACTOR	FEATURES	Length In Feet	EXCAVATION—Feet			CONCRETE—Feet			BACKFILL—Feet			
				Period	To Date	Remain'g	Period	To Date	Remain'g	Period	To Date	Remain'g	
1	AQUEDUCT CONSTR. CO.	Conduit and Siphons	22,025	0	22,025	0	0	22,025	0	0	22,025	0	
2	BARRETT & HILP AND MACCO CORP.	Conduit and Siphons	30,569	0	30,569	0	1,063	30,519	50	2,355	29,245	1,324	
3		Canal and Siphons	40,499	0	40,499	0	0	40,499	0	0	11,551	794	
6	WOOD AND BEVANDA	Siphon	15,521	0	15,521	0	0	15,521	0	0	13,043	2,478	
7	BARRETT & HILP & MACCO CORP.	Canal and Conduit	27,707	0	27,707	0	0	27,707	0	0	12,170	0	
8	WOOD AND BEVANDA	Canal and Siphons	49,339	0	49,339	0	0	49,339	0	0	7,090	800	
9	UTAH CONSTRUCTION CO.	Canal, Conduit and Siphons	47,363	0	47,363	0	0	47,363	0	0	5,319	880	
10	AQUEDUCT CONSTR. CO.	Canal and Siphons	44,505	0	44,505	0	0	44,505	0	0	3,594	1,256	
11		Canal, Conduit and Siphons	44,003	0	44,003	0	1,350	43,681	322	0	6,543	3,780	
12	THREE COMPANIES, INC.	Conduit and Siphons	32,977	1,140	32,977	0	2,617	28,427	4,550	0	23,030	9,947	
13	AQUEDUCT CONSTR. CO.	Canal, Conduit and Siphons	31,965	0	31,965	0	0	31,965	0	0	2,610	1,055	
14	THOMPSON-STARRETT CO.	Conduit and Siphons	32,366	0	32,366	0	0	32,366	0	0	32,366	0	
15		Conduit and Siphons	35,849	2,697	34,403	1,446	3,695	32,565	3,284	0	25,758	10,091	
16		Conduit and Siphons	19,359	0	19,359	0	0	19,359	0	0	19,359	0	
17	M. W. D.—FORCE ACCT.	Conduit and Siphons	21,952	0	21,952	0	0	21,952	0	109	21,444	508	
18	J. F. SHEA CO., INC.	Conduit and Siphons	27,537	0	27,537	0	0	27,537	0	475	27,057	480	
19	J. F. SHEA CO., INC.	Conduit and Siphons	37,364	4,942	9,950	27,414	1,938	2,114	35,250	0	0	37,364	0
20		Siphons	18,618	0	18,618	0	0	18,618	0	0	18,618	0	
20 A & B	M. W. D.—FORCE ACCT.	Siphons	735	0	705	30	0	0	735	0	0	735	0
3	WINSTON BROS. CO. & WILLIAM C. CROWELL	Siphon (Gene Inlet)	1,877	0	1,877	0	6	1,860	17	0	1,478	320	
4		Siphon (Copper Basin)	450	0	450	0	43	372	78	0	0	0	0
TOTALS			582,580	8,779	534,331	48,249	10,712	518,935	63,645	2,939	262,941	91,171	

### DISTRIBUTION PIPE LINES

1	AMER. CONC. & STEEL PIPE CO.	Precast Concrete Pipe	12,277	0	0	12,277	0	0	12,277	0	0	12,277
2	WESTERN PIPE & STL. CO.	Welded Steel Pipe	54,530	85	40,306	14,224	1,056	30,885	23,645	0	29,231	25,299
3	AMER. CONC. & STEEL PIPE CO.	Precast Concrete Pipe	20,124	2,970	5,770	14,354	2,704	5,420	14,704	2,625	4,805	15,319
4			25,867	0	25,867	0	0	25,867	0	0	25,867	0
5			24,889	0	24,889	0	0	24,889	0	97	24,889	0
6	J. F. SHEA CO., Inc.	Precast Concrete Pipe	27,294	0	27,294	0	0	27,294	0	0	25,838	1,456
7			30,044	3,050	4,770	25,274	3,032	4,716	25,328	2,956	3,821	26,223
9	UNITED CONC. PIPE CORP.	Precast Concrete Pipe	8,697	0	0	8,697	0	0	8,697	0	0	8,697
10			10,517	2,199	10,517	0	2,651	10,500	17	1,925	9,617	900
11			4,105	0	0	4,105	0	0	4,105	0	0	4,105
3C-9C-12C	BASICH BROTHERS	Cast-in-Place Conc. Pipe	1,656	0	0	1,656	0	0	1,656	0	0	1,656
TOTALS			220,000	8,304	139,413	80,587	9,443	129,571	90,429	7,603	124,068	95,932

## Miscellaneous Construction

March 28 to April 17, 1937

### AQUEDUCT PUMPING PLANTS AND APPURTENANT WORKS

CONTRACTOR	FEATURES	EXCAVATION—Cu. Yds.				CONCRETE—Cu. Yds.				STEEL—Tons			
		Est. Quan.	Period	To Date	%	Est. Quan.	Period	To Date	%	Est. Quan.	Period	To Date	%
WINSTON BROS. CO. & WILLIAM C. CROWELL	Intake Plant	109,412	0	106,945	98	22,192	3,404	18,619	84	1,640	240.1	983.6	60
WOOD AND BEVANDA	Gene Plant	87,256	0	87,239	99	14,700	1,390	14,182	97	2,091	14.6	1587.9	76
L. E. DIXON CO.	Iron Mt. Plant	376,513	9,100	320,095	85	20,937	1,926	18,271	87	1,735	226.1	1215.2	70
L. E. Dixon & Case Const. Co.	Eagle Plant	271,560	555	236,411	87	23,281	2,519	10,898	47	2,133	77.0	392.7	18
	Hayfield Plant	346,100	16,400	325,736	94	19,672	2,282	3,055	16	1,525	289.2	365.2	24
TOTALS		26,055	1,076,426			11,521	65,025			847.0	4544.6		

### PARKER RESERVOIR—SIX COMPANIES, INC.

FEATURES	Est. Quan.	Period	To Date	Percent
Diversion Tunnels—Excav.	3,463 Ft.	0	3,463	100
Diversion Tunnels—Concrete	3,363 Ft.	0	3,363	100
Dam, Forebay, etc., Excav.	2,182,700 C.Y.	173,500	1,650,937	76
Concrete	278,500 C.Y.	702	1,320	1

### CAJALCO RESERVOIR—GRIFFITH COMPANY

FEATURES	Est. Quan.	Period	To Date	Percent
Diversion Tunnel	2,000 Ft.	0	2,000	100
Dam & Dike Excavation	651,000 C.Y.	7,570	542,232	83
Dike Fill	4,182,000 C.Y.	123,600	3,824,700	91
Dam Fill	3,410,000 C.Y.	97,000	1,090,100	32

### BOULDER TRANSMISSION LINE—FRITZ ZIEBARTH

FEATURES	Length-Line Mi.	Period	To Date	Percent
Footings Constructed	237.0	3	237	100
Towers Erected	237.0	7	233	98
Wire Strung	237.0	6	196	83

### COMPLETED—DISTRIBUTION PIPE LINES

CONTRACTOR	Schedules	Lgth. in Mi.	Work Started	Work Completed
UNITED CONC. PIPE CORP.	Schedule No. 8	4.65	2-21-36	3-20-37

### COMPLETED FEATURES—AQUEDUCT CANAL, CONDUIT AND SIPHON

CONTRACTOR	FEATURE NAME OR SCHEDULE	Length in Miles	Work Started	Work Completed
UNITED CONC. PIPE CORP.	LITTLE MORONGO SIPHON	0.13	2-27-34	8-20-34
M.W.D.—FORCE ACCT.	FAN HILL COND. & SIPHON	0.32	10-21-33	11-19-34
MORRISON-KNUDSON CO.	BIG MORONGO & SAN ANDREAS SIPHONS	1.86	2-12-35	9-16-36
GRIFFITH COMPANY	Sch. No. 20-C, 21, 22, 23, 23A	12.79	1-5-35	10-13-36
JAHN & BRESSI Const. Co.	Sch. No. 5, CANAL & SIPHON	10.15	12-18-34	11-17-36
JAHN & BRESSI Const. Co.	Sch. No. 4, CANAL & SIPHON	10.08	6-6-35	3-18-37
TOTALS		35.33		



### SAFETY NOTES

Mr. J. C. Hoyt, Mining Engineer of the Safety Department, State of California Industrial Accident Commission, was in Banning on March 30 and 31 and April 1 and 2, 1937. During that period Mr. Hoyt and Safety Engineer Osgood of the Metropolitan Water District made joint inspections of all underground and surface workings and equipment at the San Jacinto tunnel.

### SAFETY FLAG AWARDS COACHELLA TUNNELS

Wide Camp was awarded the Coachella Division Safety Flag for March, 1937, with 3,444 man-hours worked and no lost-time accidents.

### SAN JACINTO TUNNEL

#### Tunnel Driving:

Potrero was awarded the Safety Flag for tunnel driving operations for the month of March with a frequency of 53.

#### Tunnel Concreting:

East Portal won the Safety Flag for concreting operations with a frequency of 23.

Monty Hawks of the L. A. Statistical Section contributes this "head scratcher" as a brief lull in the more serious business of building an aqueduct:

Smith and Brown were both driving from different directions toward the Banning station to meet the 4 o'clock train. Smith's watch was 10 minutes slow but he thought it was 5 minutes fast. Brown's watch was 5 minutes fast but he thought it was 10 minutes slow. What time did each get to the station?



The beginning of a home run. Girl baseball enthusiasts in action on the diamond at the Parker Dam school. The Colorado River forms one of the outfield boundaries on this ball park, and a ball knocked into the river is automatically good for a "homer."

## MONTHLY REPORT REVIEWS ACTIVITIES ALONG THE AQUEDUCT LINE

(EDITOR'S NOTE: The following is a brief summary of some of the activities of the District as set forth in the monthly report of General Manager F. E. Weymouth, filed with the Board of Directors in April, and covering work done in March.)

### Legal Division

The proposed bill, amending the Metropolitan Water District Act, was passed by the Assembly of the State Legislature and has been reported favorably out of the Senate Committee on Municipal Corporations. All necessary documents to secure payment for Interim Certificate No. 61 in the denomination of \$1,800,000, representing bonds heretofore sold to the R.F.C., were prepared, and payment for this certificate was made on March 9.

### Miscellaneous Activities Division

A total of 892 applicants were cleared through the Labor Employment office for work on the aqueduct. Of this number, 97 were sent to the field for force account work, and 795 were made available to aqueduct contractors. A new motion picture prepared to give public information concerning the progress of construction work on the aqueduct was released by the District during the month.

### Field Engineering and Construction

*Safety Engineering*—See safety awards, first column this page.

*Testing Laboratory*—During March approximately 168,000 barrels of cement from the mills were sampled and tested. A total of 930 concrete specimens were received from the field and prepared for tests, and approximately 900 others previously received were tested at the age of 28 days.

*Operation of Utilities*—During the period February 15 to March 15, 6,076,498 kw. hr. of power was used, 14,156 long distance telephone calls were handled, and 4,433,747 cubic feet of water was delivered.

*Aqueduct Construction*—See progress tables on pages 4 and 5. Contractors on open work continued excavating and concreting operations. Conduit construction was 39.2 miles complete out of 51.7 miles; canal lining was 61.9 miles complete out of 62.2 miles to be built; and 24.2 miles of siphons have been built out of the 26.3 miles to be constructed.

### Civil Engineering Division

*Specifications*—During March bids were opened under six sets of specifications, including No. 195 for sluice gates

for pumping plants, and No. 190 for the Gene Wash and Copper Basin dams. During the same period, six sets of specifications were issued, including those for transformer cranes, warehouses at pumping plants, and air conditioning systems, (see story page 3).

*Design*—Plans have been prepared for 54-inch and 50-inch precast concrete pipe, or mortar-lined steel pipe; and 57-inch and 53-inch enamel-lined pipe for the Palos Verdes cross feeder.

*Materials*—During the month orders were placed for 775 tons of billet steel of which 493 tons were ordered for the pumping plant, 205 tons for the distributing system, and 77 tons for the main aqueduct. In addition, 96 tons of rail steel were ordered for the distribution system. Approximately 199,000 barrels of cement were shipped to the field.

### Distribution Division

*Office and Field Engineering*—Final location surveys on the Palos Verdes cross feeder were continued throughout the month. This work includes the staking of center line, mapping of surface and underground interferences, and taking of samples along the route to determine the corrosivity of the soil.

*Field Construction*—See progress tables pages 4 and 5.

### Electrical Engineering Division

*Field Construction*—See progress tables pages 4 and 5.

*Office Engineering*—Work was continued on the detail drawings for the installation of pumping plant equipment, and specifications were issued for paper insulated cable, pump inlet connections, and transformer cranes.

### Personnel Division

Forty-eight classified positions were filled during the month, and there were 3,635 changes of status recorded.

### Purchasing Division

Purchase orders issued during the month numbered 1,770 and amounted to approximately \$261,594. Carload forwardings for the month numbered 712.

### Accounting and Costkeeping

The total cost of the construction accomplished to March 31, 1937, was \$129,043,653.



# NEWS FROM FIELD AND OFFICE

The Banning society correspondent reports the arrival in the Irving Burdman household of a daughter, born in Los Angeles on April 14. This is the second addition to Irving's family, and apparently the novelty has worn off because no vital statistics were included in the report. Burdman is in the Banning Engineering office and has been with the District since 1931.



Presenting "Mike," who is boss of the clan of seven-toed (count 'em) cats at Division 1 Headquarters. Holding Mike is Dick Rofelty of the Division 1 engineering staff, and "head" man as far as all the cats in camp are concerned.

Spring fever apparently hit the golf bugs so hard that only nineteen of them turned out for the last tournament, which was held on April 11. Those who did come out, however, showed signs of approaching the Bobby Jones class, to-wit: McMahon, of Graybar Electric was winner with a gross of 82 and a net of 71; runner-up was Snell Robertson of the Electrical-Mechanical Division—with a net of 72; Ezra Rider of the District turned in a net of 73, as did Stockton of the Union Hardware Co. The next match is to be held on May 23, the course to be announced at a later date.

\* \* \*

A dispatch in the San Bernardino Sun which is dated Beaumont, April 3.—Metropolitan Water District aqueduct workers' children represent 18 per cent of the Beaumont High School enrollment, according to a survey made under the direction of Supt. Donovan F. Cartwright. . . . Of the 141 students, 26 are the children of aqueduct employees.

## Aqueduct Temperatures April 1 to April 15, 1937

	Max.	Min.
Div. 1 .....	89°	41°
Div. 2 .....	89°	43°
Div. 3 .....	86°	45°
Div. 4 .....	81°	42°
Divs. 5 and 6.....	89°	30°

The reorganization of various divisions, due to the completion of old work and the starting of new schedules, accounted for the transfer of the following District employees during the period from April 1 to April 15:

General Clerk Stephen Mihelick from Division 2 to the Banning Laboratory.

Inspector B. E. Crocker from Division 2 to Division 3.

General Clerk J. E. Henry from Division 4 to the Operating Division.

General Clerk Edward R. Wilson from Division 4 to Division 5.

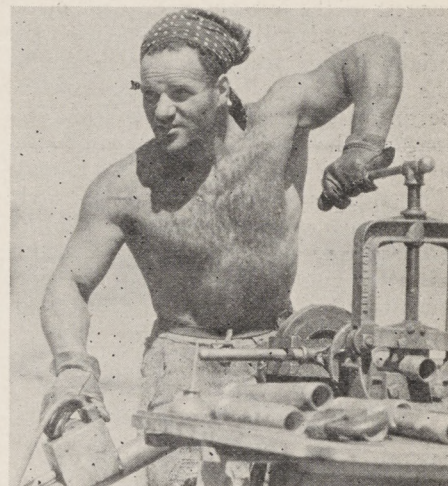
A. B. Stoker from Division 4 to Master Mechanic Division 5.

Inspector John R. Curran from Division 4 to the Distribution Division.



One look into the eyes of these three young aqueducters will convince even the most prosaic observer that there are no dull moments when they're in camp. From left to right they are Jack Zane Price, Billie Ray Price, and Zack Payne Price. Jack and Zack, the end men, are twins, age 5½. Billie is 4. They are the sons of Roy Price, chef at Division 3 Headquarters. Their dad has been a chef on the aqueduct since 1933, and is the proud papa of three other sons in addition to this trio.

Barbara Louise Winzell made her debut in the Walter Winzell home at 9:30 A. M. on April 23. Her papa, who has already received a stock of "Father's Day" neckwear, is employed in the L. A. Office Mails and Files Section. He is one of the men who turns out all those pretty blueprints that are tacked on the walls from Los Angeles to the River.



This piratical looking gent might have been one of the crew of the Spanish galleon that discovered the Rio Colorado in 1540. Instead, however, he is "Phil" LeZontier, an electric conduit craftsman working on the construction of the Intake Pumping Plant.

C. B. White, formerly in the Los Angeles Accounting Division, resigned from the District on April 15 to accept a position with the American Liquid Gas Co. in Los Angeles. "Charlie" White has long been the impresario of the employees' golfing, having been Secretary-Treasurer of the Golf Club. According to Jimmie Swinford, White did not turn in his own score for the last tournament inasmuch as he ran out of balls, and had to quit on the ninth hole. Charlie will continue to play in the District tournaments.

\* \* \*

As promised by the Cajalcoites, the dinner dance sponsored by that group on April 10 proved to be the social event of the spring season. Held at the Lake Norconian Club, the affair was attended by more than a hundred Cajalco engineers, contractors' employees, members of the L. A. Office, and their ladies. The party started early and lasted at the club until the orchestra ran down—thereafter it moved to a few of the homes of the aforesaid Cajalcoites.



## Construction Notes Along the Line

Reviewing the weekly progress reports sent in from the various division headquarters reveals a number of interesting notes that do not appear in the progress tables in the NEWS.

Riveting of the steel delivery line from the Gene pumping plant to the East Portal of Copper Basin Tunnel No. 1, was completed on April 6. This is the longest of the five pumping plant delivery lines and will lift the water a total height of 303 feet. For the benefit of the statisticians, here are some of the pertinent figures. This line is 2,142 feet long and has 2,259,328 pounds of steel in it (including the weight of the rivets). The rivets alone weigh approximately 38,000 pounds, and number 58,194. (There are no accurate figures available as to the number of strokes of the rivet guns that were necessary to drive all of these rivets home.) The line is being constructed by the Consolidated Steel Corporation of Los Angeles who is a subcontractor for Winston Bros. and Crowell.

Farther west, at the Cajalco Reservoir, it is learned that the services of the United States Army Air Corps have been enlisted in obtaining accurate weather reports which are used in connection with the construction of the various features of that project. This information is obtained from the Army Air Base at March Field, which is located a few miles from the reservoir site. The Army fliers in turn have made good use of the construction at the reservoir. The constant stream of dump trucks hauling dirt from the borrow pits to the dam and dike have easily been simulated by the airmen to represent "enemy truck columns." These "enemy columns" have been systematically bombed and strafed by ships from March Field nearly every day since construction was started.

Down in Pasadena, aqueduct construction is progressing in the immediate vicinity of Southern California's synonym for New Year's Day—the Rose Bowl. Construction work is now under way on Distribution Schedule No. 11, precast concrete pipe, which crosses the Arroyo Seco a few hundred yards south of the famous stadium. Being built by the United Concrete Pipe Corporation, this line is 9-feet 8-inches in diameter and 4,105 feet long. The laying of pipe sections was started during the week ending April 24 on this schedule.

## Who's Who On the Aqueduct



**B. H. Martin**

### **B. H. MARTIN**

*Construction Engineer, Iron Mt. Pumping Plant, M.W.D.*

Born August 7, 1892, Elgin, Ill. . . . Graduated from the University of Wisconsin with B.S. degree in 1917. . . . With the United Water, Gas and Electric Co. of Hutchinson, Kan., for three years. . . . 2½ years with the Department of Water and Power, City of Los Angeles. . . . Four years with Public Service Dept., City of Glendale. . . . Has been with Electrical and Mechanical Division of M.W.D. since December, 1932. . . . Is married and has two children.

### **W. E. HALL**

*President, W. E. Hall Const. Co., Sub-contractor on Construction of Cajalco Outlet Tower*

Born in Tomah, Wisconsin, January 1, 1891. . . . Came to the West in 1913. . . . First job was with the Johnson-Shea Co. in Riverside, Calif. . . . 1915-1918 with the Lynn Atkinson Co. in Los



**W. E. Hall**

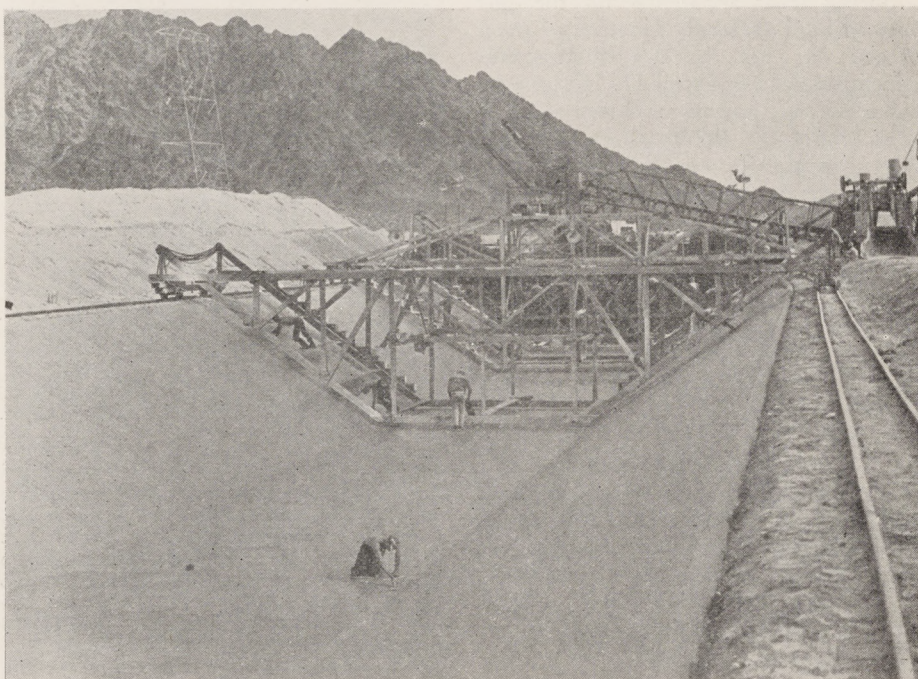


**W. W. Aultman**

### **W. W. AULTMAN**

*Assistant Engineer, Hydrographic Section, M.W.D.*

Born September 23, 1905, Trinidad, Colorado. . . . Received degree of B.S. in Civil Engineering at California Institute of Technology in 1927. . . . Had three years of geophysical work before coming with the District in May, 1930. . . . His work with the M.W.D. has consisted of making water supply and source studies, geophysical studies, and supervising the purification work necessary in the District's construction water system. . . . Is married and has two daughters. . . . Answers to "Bill."



Aqueduct Construction Company crews completing canal lining in Schedule 11.